Mayo, R., Avent, C. M., and Mayo, C.M. (2012). Promoting communication wellness in college student-athletes. ECHO, 7(2), 11-21. Made available courtesy of the National Black Association for Speech-Language and Hearing. http://www.nbaslh.org/publications/echo/ECHO-Vol7-No2.pdf. No further reproduction is permitted without written permission from the association.



PROMOTING COMMUNICATION WELLNESS IN COLLEGE STUDENT-ATHLETES

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ABSTRACT

Communication wellness involves education and consultation to promote practices that will develop and maintain optimal communication. The purpose of this paper is to present a program designed to promote communication wellness in a group of college student-athletes. Elements of the program are described and forms of communication disorders commonly observed among this student population are presented. Applicability of the strategies described in this program to promote communication wellness in other young adult populations is discussed.

KEY WORDS: Communication wellness, Communication disorders in college-age students, Health promotion and college studentathletes, Healthy People 2020

ECHO

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INTRODUCTION

Part of being a college student-athlete involves representing the university in a manner that is consistent with its mission/ goals (e.g., demonstrating academic achievement and integrity, increasing student engagement, connecting with communities, enhancing institutional image). Through sporting events, public speaking engagements, and media coverage, student-athletes become highly visual and verbal representatives of the university. In an age of ubiquitous media coverage of college sporting events (live, tape-delayed, or online streaming video), university athletes are frequently asked to speak spontaneously before the camera, and thus endure the verbal and nonverbal scrutiny of fans, alumni, faculty, and their fellow students. Data from the National Collegiate Athletic Association (NCAA, 2011) reveal that student-athletes attending Division I, II, and III institutions graduate at significantly higher rates than their peers from the general student body. It is also noteworthy that large numbers of minority student-athletes participate in intercollegiate athletics with African American athletes dominating the ranks of sports like basketball and football (Irick, 2011).

Regardless of their strong academic performance and graduation rates, surveys of male and female student-athletes suggest that they frequently feel the need to fight the "dumb jock" image (Fletcher, Benshoff, & Richburg, 2003; Harrison, 2002; Lawrence, Harrison, & Stone, 2009; Potuto & O'Hanlon, 2006). As noted by Cooper (2012), "despite the fact that the dumb jock theory has yet to be supported by scientific research, the insidious acceptance of this theory within U.S. educational institutions has presented significant psychological and social obstacles" for student-athletes. (p. 263). It is likely that the oncamera communication performance of student-athletes or their verbal participation in classroom activities can, in the view of the aforementioned constituents, contribute to or discredit that image.

Though most student-athletes do not continue their sport professionally after leaving college (e.g., less than 3 percent of all college athletes go on to any level of professional sport, NCAA, 2011), they often have aspirations to continue working in the field of sports in roles such as reporters, commentators, etc. that entail oral and nonverbal communication. However, such roles are highly competitive and require effective communication skills (Stankovich, Meeker, & Henderson, 2001). According to Ruben (2000) an athlete with no job and poor communication skills is not merely unemployed, but rather s/he is unemployable. Ruben adds, "On the other hand, a paraplegic in a wheel chair with good communication skills can earn a good living and add to the wealth of the society." (p. 245). Thus, it becomes evident that life preparation in a highly communicative society and information age is an essential part of the college experience as student-athletes in the twenty-first century face an era of survival of the communicatively fittest (Mayo et al. 2007).

Similar to their peers in the general student population, a number of student-athletes are less-than-effective communicators. For some student-athletes, this challenge may be attributable to dialectal differences and/or regional or foreign accents, underdeveloped oral/nonverbal communication skills, or high public speaking anxiety. Still, others may have clinically significant communication disorders such as stuttering, articulation errors, voice quality disturbances, or hearing loss that may be undiagnosed, untreated or undertreated.

It is notable that the prevalence of communication disorders may be higher among student-athletes than the general college student body. Culton (1986), citing longitudinal data collected over a 13-year period, reported a communication disorders (i.e.,



articulation, voice, and fluency) prevalence rate of 2.42 percent among non-athlete college students. By contrast, Robinson and Crowe (1987) reported that of the nearly 100 university studentathletes, whom they screened for communication impairment, 21 percent exhibited a voice disorder, 10 percent had a hearing impairment, and two percent stuttered. Robinson and Crowe's (1987) finding that nearly one-third of college student-athletes presented with a communication disorder is surprising inasmuch as the prevalence rate for such conditions among the general population of the United States is estimated to be between five and 10 percent (Ruben, 2000). This finding suggests that studentathletes warrant particular surveillance of their communication abilities in order to prevent or identify early the presence of communication disorders.

One way of preventing communication disorders is through providing opportunities for persons to engage in screenings/ assessments, self-help activities, and educational programs with the goal of improving their quality of life and communication wellness. As defined by ASHA (2007), communication wellness "involves education and consultation to promote practices that will develop and maintain optimal communication."

The purpose of this paper is to describe a program, Athletes Communicating Effectively (ACE), designed to promote communication wellness in a college student-athlete population. The mission of the ACE program, is to enhance college studentathletes' (a) communication wellness; (b) interpersonal and public communication skills; and (c) communication exchanges in the classroom with faculty and fellow students. Within this paper we focus our discussion on the first of the aforementioned three missions of ACE, enhancing communication wellness among college student-athletes. Following a general description of the ACE program, we present the communication wellness components of the program utilized with student-athlete participants.

BACKGROUND, MISSION AND PROGRAM GOALS

Athletes Communicating Effectively (ACE) is a collaborative program between the Department of Communication Sciences and Disorders, the Department of Public Health Education, and the Department of Athletics at a large four-year university located in the South Atlantic Region of the United States. The university sponsors 18 NCAA Division I men's and women's intercollegiate athletic teams. Developed in 2007, ACE is part of a fifteen-week for-credit course designed to promote health and wellness among student-athletes. The first half of the course focuses on substance abuse prevention and is coordinated by an instructor in the Department of Public Health Education. The second half of the course, which comprises the ACE program, is directed by a faculty member and a staff person in the Department of Communication Sciences and Disorders and the Department of Athletics, respectively. The mission of ACE is to equip participants with the knowledge and skills for successfully communicating verbally and nonverbally in a variety of venues, including athletic events, the classroom, meeting with professors and job interviews. Likewise, student-athletes learn the basic neurological and anatomical structures and functions of the systems which support speech, language and hearing. Studentsathletes are also taught how to protect those structures from damage that might impair effective communication. Finally, strategies to optimize communication wellness are presented.

To measure the success of ACE, two overarching communication wellness program goals were developed. These goals were:

- 1. Identify student-athletes who exhibit communication disorders.
- 2. Limit to no more than two annually, the occurrence of new cases of communication disorders among student-athletes by reducing their risk factors.

COMMUNICATION WELLNESS/HEALTHPROMOTION COMPONENT

Within ACE, we utilize a communication wellness/health promotion approach. As mentioned above, in defining communication wellness for our participants we employ the operational definition published by ASHA (2007). Additionally, in describing for our student-athletes what the overall concept of wellness/health promotion means, we use the following definitions:

Communication wellness involves engaging in lifestyle practices that promote healthy development and optimal sustainability of those body parts responsible for speech, language, voice and hearing across the lifespan, from infancy to adulthood (Mayo, 2011).

Health promotion is the science and art of helping people change their lifestyle to move toward a state of optimal health. Optimal health is the process of striving for a dynamic balance of physical, emotional, social, spiritual, and intellectual health and discovering the synergies between core passions and each of those dimensions. Lifestyle change can be facilitated through a combination of efforts to enhance awareness, increase motivation, build skills and most importantly, to provide opportunities for positive health practices. (O'Donnell, 2008, p. 3)

Our approach with ACE is based on a classic social ecological model of health promotion described by McLeroy, Bibeau, Steckler, and Glanz, (1988). This model seeks to move the student-athlete along a path of lifestyle changes (see Figure 1) that (a) increase awareness of the presence or absence of a communication disorder; (b) change behavior by educating the student-athlete about communication, basic structures and functions of the human communication system, various speech, language and hearing disorders and how these disorders can be prevented; (c) promote lifestyle change within the studentathlete by increasing his/her motivation to address their specific



communication disorder and working with them to build the skill set to accomplish this change; and (d) create environments that support healthy communication practices and move participants to engage in and maintain high level communication wellness. A brief description of each of these points along the pathway of lifestyle change and the strategies utilized to enhance communication wellness is presented below.

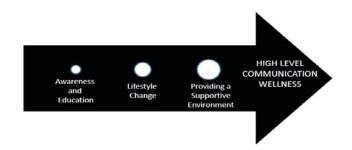


Figure 1. The Communication Wellness Enhancement Path.

Awareness and Education

In broad health education practice, awareness strategies are designed to increase a client's knowledge of or interest in a health-related area. Such strategies might be delivered through newsletters, health fairs, speech-language-hearing screenings, internet websites, and classes or seminars. At the beginning of the awareness and education stages of the ACE program, each student-athlete is evaluated in areas of fluency, voice, articulation and hearing by a certified speech-language pathologist (SLP) and a SLP graduate student-in-training using a screening protocol developed by ACE personnel. Participants who fail any of the screening evaluations are made aware of this fact by the examiner and are interviewed about their history with the communication disorder and any treatments they may have received. In some instances, a student-athlete is aware that she/ he has a communication disorder prior to the screening and the test results confirm their knowledge. In follow-up discussions with the latter type of participant, they frequently share that their communication issue was of a pre-existent nature (e.g., a fluency disorder) or that it was "seasonal" (e.g., a voice quality disorder secondary to vocal abuse/misuse that occurs primarily during their competition season). Still other student-athletes who fail the screenings report that they were unaware they had a communication disorder. These participants typically exhibited a hearing loss. We also ask student-athletes about any history they may have of sport- and non-sport-related head injuries/ concussions/loss of conscious. We ask this same question of the team physicians and athletic trainers to corroborate the responses of participants.

During the awareness stage of ACE, the student-athlete who fails the screenings is provided with information on the type, severity, and prognosis for his/her communication disorder. In

the awareness stage, student-athletes are asked to describe any physical symptoms they may be experiencing, any changes they noticed in their communication abilities over time, and how their communication disorder alters the way they function or are perceived in the classroom setting, in social interactions, by family members, friends, teammates, coaching staff, and on the competition field/court. Additionally, for all studentathletes participating in ACE (those who failed or passed the screening evaluations), information is gathered on their history of prolonged occupational or recreational exposure to loud noises as well as their use of personal listening systems (i.e., IPods) and their past and current use of voice. Finally, as part of the awareness stage, student-athletes are encouraged to ask questions about the screening findings and the implications of these results. With the permission of the student-athletes, failed screening results are shared with their coaches and the appropriate athletic administrative staff member(s) to make them aware of the communication challenges these students face and to enlist their cooperation in providing support services for them.

Based on our previous health promotion work with older adults (Mayo & Mayo, 1996), we have found it very important to assess student-athletes from a holistic frame of reference to determine if they are viable candidates for participating in a wellness program such as ACE. Thus, we ask questions about participants' pre-existing health status, nutritional lifestyle, level of exercise (beyond specific training for their sport), leisure pursuits, exposure to and management of internal and external stress, degree of support from family or significant others, cultural background, affiliation with community institutions and personal and communication style as they enter the ACE program. This information allows us to assist participants as they develop goals and carry them out during the educational, lifestyle change and support stages of the program.

In the education stage of ACE, participating student-athletes engage in learning modules designed to help them achieve overall and individual communication wellness goals. These learning modules are as follows:

- 1. Communication and Society
- 2. What is Effective Communication?
- 3. Forms of Communication: Verbal, Nonverbal, Interpersonal
- 4. Countering Communication Stereotypes & Miscommunication
- 5. Communication Wellness: Speech, Language, Voice and Hearing:
 - A. Basic Structure and Function of the Speech, Language, Voice and Hearing Systems
 - B. Common Disorders of Speech, Language, Voice and Hearing
 - C. Are You At Risk for a Communication Disorder?
 - D. Prevention of Communication Disorders
 - E. Developing Your Communication Wellness Goals



In discussing the prevention of communication disorders in the education stage of ACE, student-athletes learn about the three levels of prevention practice---primary, secondary, and tertiary, and are given examples of behavioral practices that exemplify each level. Table 1 lists and describes each of the levels of prevention. Most student-athletes who participate in ACE do not exhibit an actual communication disorder and consequently operate at the primary prevention level where they learn to inhibit the development of a communication disorder by altering their behavior, lifestyle or communication practices.

Table 1. Levels and Definitions of Primary, Secondary, and Tertiary Prevention of Communication Disorders (Modified from ASHA, 1988, Marge, 1988 and Mayo, 2011).

Level of Prevention	Definition	Examples: General Population	Examples: College Student-Athletes
Primary Prevention	The elimination or inhibition of the onset and development of a communication disorder by altering susceptibility or reducing exposure for susceptible people. Approaches include interventions and behaviors that eliminate the cause or causes of disabilities before individual exposure.	General Population: Men desiring to procreate quit smoking, excessive drinking of alcohol, and use of drugs that can cause mutations in sperm and increase the chances of pre-, peri- or post-natal problems.	Student-Athletes: Modification/improvement of protective features and function of football helmets to reduce incidence of concussions in current and future student-athletes.
Secondary Prevention	The early detection and treatment of communication disorders. Early detection and treatment may lead to the elimination of the disorder or the retardation of the disorder's progress, thereby preventing further complications. The major strategy used is screening of asymptomatic or susceptible populations.	General Population: Early assessment of disfluent preschool age children and referring at-risk youngsters for indirect or direct fluency intervention.	Student-Athletes: Providing routine hearing screenings of student-athletes as part of their required department of athletics annual health assessment. Offering laboratory tests to identify biological markers of concussion in contact sports. http://www.cbssports.com/mcc/blogs/ entry/22475988/27696073.
Tertiary Prevention	The reduction of disability by attempting to restore effective functioning. The major approach is rehabilitation of the disabled individual who has realized some residual problem as a result of the disorder.	General Population: Providing language/ communication therapy for a client with aphasia following a stroke.	Student-Athletes: Providing voice therapy for student- athletes with sport activity-induced voice disorders (e.g., vocal nodules, contact ulcers).

However, some of our participants enter the program with a communication disorder and thus, are in need of secondary and/or tertiary prevention services (e.g., assessment and/or treatment). During the education stage, the student-athlete with a communication disorder learns about the etiology, prevalence, signs/symptoms and the preventable or non-preventable nature of

his/her disorder. Finally, it is in the education stage where student-athletes begin to develop communication wellness goals that are specific to their needs and interests. These goals are later expanded in the lifestyle change stage of ACE.

Lifestyle Change

Lifestyle change can be facilitated through a combination of efforts to enhance awareness, increase motivation, build skills and most importantly, to provide opportunities for positive health practices (O'Donnell, 2008). In the context of health, 'lifestyle' has been defined as all those behaviors over which an individual has control, including actions that affect a person's health risks (Ardell, 1979; Walker, Sechrist & Pender, 1987). Examples of lifestyle change programs include smoking cessation, exercise and nutrition education, weight loss, and communication skills enhancement (O'Donnell, 1995).



In the lifestyle change stage of the ACE program, all studentathletes work to develop a personal plan to prevent a communication disorder. The prevention plan covers one or more of the three levels of prevention described previously---primary, secondary, or tertiary, depending on the needs and interests of the student-athletes. In developing their personal communication wellness plan, participants have the opportunity to work with a speech-language pathologist (RM) and a communication skills coach (CA) individually or in a group with other student-athletes. Within their personal communication wellness plan, participants articulate their goals (e.g., 'Prevent a noise-related hearing loss'); indicate the anatomical and neurological structures that need to be protected to prevent a disorder/enhance wellness (e.g., 'Structures of the inner ear'); identify their specific risk factors (e.g., 'Frequent listening to music at high intensities on my iPod', 'I have a family history of hearing loss'); develop and utilize wellness strategies (e.g., 'Wear ear protectors when using power tools', 'Listen to music on my iPod at lower loudness levels and for shorter time periods') and assess and report their progress. In this context within the lifestyle change stage of ACE, participants are learning to engage in primary prevention practices to inhibit the onset/development of a communication disorder.

Student-athletes who present with actual communication disorders also develop personal communication wellness plans. The personalized plans can include primary, secondary and tertiary prevention goals. For example, in the case of a student-athlete with a voice quality disorder, his/her personal communication wellness plan might include the primary prevention goals of 'Eliminating vocally abusive behaviors that contribute to my voice disorder' and 'Consistent use of pitch and loudness levels that maintain healthy voice.' Additionally, this same student-athlete might require intervention services for his/ her voice disorder in the form of complete or modified vocal rest (secondary prevention/early detection and treatment) or voice therapy/voice rehabilitation (tertiary prevention/reduce disability, restore effective function). As part of the lifestyle change stage of ACE, student-athletes who have a communication disorder can elect to receive intervention services at the on campus speech and hearing center or from professionals in the local community to enhance their communication wellness.

Lastly, in the lifestyle change stage, we ask all ACE participants to identify their personal motivations for engaging in communication wellness and the personal benefits of pursuing a healthy lifestyle. These reasons are then incorporated into participants' personal wellness plans and are used to encourage them to engage in health-promoting practices throughout their lives.

Environmental Support

With respect to providing the individual with a supportive environment in which to carry over lifestyle change, Cohen and Chehimi (2007) observed that prevention initiatives and efforts often focus on changing individual behaviors alone while ignoring the societal context surrounding them. As personal choices are made in the context of a larger environment and many health problems are related to conditions outside the individual's control, primary prevention and wellness programs must broaden their initiatives to focus not only on the individual but also his/her environment i.e., the home, school, work setting, and/or community.

Environmental support can take the form of institutional policy designed to promote health within the workplace (e.g., establishing a smoke-free work setting), formation of self-help/ advocacy groups, or development of personal wellness programs that involve interaction with a support person, peers, coach, or faculty member to help maintain and provide motivation for change (O'Donnell, 1995). Indeed, for participants of ACE, the major sources of environmental support for their communication wellness plans and activities are peers, teammates, coaches, athletic staff and faculty members. When ACE participants grant permission, the results of their screenings and/or wellness plans can be shared selectively with these individuals. The support of these partners can empower the student-athlete as he/ she engages in lifestyle changes. Specifically, members of the student-athlete's environmental support system can assist him/ her gaining access to additional specialized services, if needed, and by providing feedback, reminders and reinforcement as the student-athlete seeks to carry over her/his wellness activities into real world settings.

Sample Student-Athlete Personal Communication Wellness Plans

Figures 2 and 3 present examples of personal wellness plans for two of our ACE student-athletes. The names of the participants illustrated in these figures have been changed for purposes of confidentiality. Sections of the plans of both student-athletes which correspond to the awareness and education, lifestyle change, and environmental support components of the ACE communication wellness model are shown in parentheses.

The sample communication wellness plan shown for 'Jane Smith' (Figure 2), illustrates her personal need/motivation for communication wellness, her plan for changing her lifestyle to achieve her goals, and the types of environmental support which can be offered for the maintenance of personal wellness. Although most wellness programs assist the person in identifying health issues which focus on their self-responsibility, environmental factors are seldom considered. As environmental considerations are a unique component of this model, we elaborate on this feature in Jane Smith's personal communication wellness plan. For instance, in the area of environmental support, Coach 'Amy



Goodeed', takes an active role in assisting with Jane's plan by agreeing to hold cheer practices without voicing or minimal voicing required by Jane for two days prior to games. This type of environmental support allows Jane to remain a member of the cheer squad, have periods of vocal rest in an effort to not exacerbate damage to her voice from constant cheer shouting and to recover from her vocal injury. Likewise, Jane's peers can offer support. In her plan, Jane makes the decision to decrease vocally abusive behaviors like screaming or loud laughter. When she is among her peers and starts to engage in abusive vocal activities, they can remind Jane of the strategies she outlined in the plan to protect her voice. Furthermore, with the support of her peers and coaches, Jane will be able work the summer cheer camp in a capacity not requiring vocal demonstrations. She can serve in an administrative capacity and remain an integral part of the camp, while her peers and coaches show how to cheer. Lastly, Jane notes that a professor has trouble hearing her sometimes during presentations because her voice gives out. At the recommendation of the instructor, Jane may use a headset microphone/voice amplifier system when making oral presentations in class to project her voice around the room for all to hear. All of these individuals and actions within her environments make it possible for Jane to accomplish the goals of her communication wellness plan, which can contribute to her success in the classroom, as an athlete and future attorney.

Figure 2. Example of Personal Communication Wellness Plan for a Student-Athlete.

PERSONAL COMMUNICATION WELLNESS PLAN FOR 'JANE SMITH'

Sport: Cheer	Coach: 'Amy Goodeed'
Year: Sophomore	Academic Advisor: 'Mary Doe'

History of and Risk for Communication Disorders (Awareness and Education)

Voice: Vocal Nodules. I developed vocal nodules my freshman year of cheering at the university. My ENT doctor placed me on vocal rest. My risk for a voice problem is high because I am on the cheer squad. I am a scholarship athlete. So, quitting the cheer team is not a financial option for me.

Personal Need for Effective Communication Abilities (Lifestyle Change)

My ability to produce a clear voice is significant to me as a person. I do not like people making comments or jokes about the way I sound.

As a student, my ability to speak with a clear voice is important to my success in the classroom. When my voice gives out, one of my professors sometimes tells me she has trouble hearing me in class when I ask or answer questions or give an oral presentation.

I want to be an attorney. So, my ability to produce a clear, powerful and confident voice is definitely important to my success.

Plan (Lifestyle Change)

I will increase my daily water intake to keep my voice healthy.

I will engage in non-cheer voicing two days before each game. 'Coach Goodeed' has agreed to conduct practice without cheer voicing for two days prior to each game.

I will reduce my vocally abusive behaviors of coughing, screaming, loud laughter, and non-cheer shouting.

I will use a headset microphone/voice amplifier system when I give oral presentations in my classes.

This summer I will work for a local university Cheer Camp in a role that does not require me to lead cheers or vocally demonstrate cheers.

Environmental Support

On-Campus: 'Coach Goodeed', teammates, 'Dr. Helpful' (one of my professors), my friends, and ACE staff

Off-Campus: My parents, boyfriend, aunt, and friends



Figure 3. Example of Personal Communication Wellness Plan for a Student-Athlete.

PERSONAL COMMUNICATION WELLNESS PLAN FOR 'JOHN SMITH'

Sport: Men's Basketball	Coach: 'Joe Buckets'
Year: Freshman	Academic Advisor: 'Mary Doe'

History of and Risk for Communication Disorders (Awareness and Education)

None. But I have ringing in my ears which I learned might be associated with listening to my iPod at high volume levels and/or jobrelated noise exposure. My risk for a hearing loss might be higher because I work with loud noise-producing equipment in my summer job and I have not worn ear protection.

Personal Need for Effective Communication Abilities (Lifestyle Change)

My ability to hear well is significant to me as a person. I want to be able to clearly hear my friends, family, teammates, and coaches.

As a student, my ability to hear well is vital to my success in the classroom. I need to be able to hear my professors in classroom lectures/labs and my fellow students in small-group course activities.

I want to become a sports broadcaster. Therefore, my ability to hear well is important to my success.

Plan (Lifestyle Change)

I will now listen to music at a healthy, non-harmful volume under my iPod using the volume limiter on my device. http://support.apple. com/kb/TA38403

I will wear an ear protection device when operating lawnmowers, trimmers, and blowers during my summer landscaping/lawn care job.

Environmental Support

On-Campus: My friends, teammates, coaches, academic advisor, faculty members, and ACE staff

Off-Campus: My mother and sister, girlfriend, friends, boss on my summer job, co-workers

PROGRAM RESULTS

The two primary communication wellness goals of the ACE program were to (1) identify student-athletes who exhibit communication disorders and (2) limit to no more than two annually, the occurrence of new cases of communication disorders among student-athletes by reducing their risk factors.

Goal 1 Outcome

The objectives of the first program goal were as follows: By the end of the ACE course participants will:

- (1) know whether or not they have a communication disorder,
- (2) describe the type and severity of their communication disorder, and
- (3) select options for managing their communication disorder.

Between the years 2007-2010, 150 student-athletes participated in ACE. Of these students, 18 (12 percent) presented with clinically significant speech, voice or hearing disorders (see Table 2). While fewer of our student-athletes exhibited a communication disorder than those reported by Robinson and Crowe (1987), our figure of 12 percent exceeds the prevalence rate of 2.42 percent among non-athlete college students (Culton, 1986) and the estimate of five to 10 percent within the general population (Ruben, 2000). Our results again underscore the need to assess and monitor the communication abilities of collegestudent athletes to prevent or identify early, the presence of a communication disorder.

Table 2. Communication Disorders Exhibited by Student-
Athletes Participating in the ACE Program 2007-2010.Number of Student-Athletes with Disorder Indicated in
Parentheses.

Type of Communication Disorder and Participant Gender			
Hearing Loss (9)			
Sensorineural loss			
Male = 5 Female = 1			
Conductive loss			
Male = 3			
Voice Quality (7)			
Chronic hoarseness			
Female = 5			
Chronic harshness			
Male = 2			
Fluency (2)			
Stuttering			
Male = 1			
Cluttering			
Male = 1			



After receiving the results of their communication screening evaluations and counseling from ACE staff, all participants with a communication disorder were able to describe to ACE staff, coaches, peers or faculty, their disorder (i.e., type, signs/ symptoms) and its impact on their daily lives (i.e., the severity of the condition). When offered options to manage their communication disorder, 83 percent of the 18 student-athletes with a communication disorder chose to pursue follow-up services (i.e., additional assessment, counseling, or intervention).

Goal 2 Outcome

The objectives of the second program goal were as follows: By the end of the ACE course participants will be able to:

- (1) describe three processes involved in normal speech/voice production and hearing,
- (2) list three activities that can increase their risk of developing a communication disorder,
- (3) list five personal benefits to seeking communication wellness,
- (4) discuss three strategies they used to reduce their risk for developing a communication disorder, and
- (5) identify three persons who supported their efforts to engage in behaviors that facilitate communication wellness.

Here we focus our report on the 132 ACE participants who did not exhibit a communication disorder. All of the studentathletes achieved the five objectives of this goal. Table 3 provides examples of student-athletes' most-frequently stated comments under three of the objectives. Nearly all studentathletes participating in ACE (95 percent) linked their reasons/ motivations for seeking communication wellness to (a) being viewed as a competent communicator; (b) fitting in socially; (c) maintaining their overall health; (d) performing well in the classroom; and (e) career opportunities after college. Finally, none of the student-athletes who participated in ACE over the three-year period developed a new communication disorder.

Table 3. ACE Program Goal 2 Objectives: Examples of ACEParticipants' Most-Frequently Stated Responses.

'Activities that are not a part of my sport that can increase my risk for developing a communication disorder'

- · Loud noises/music. Recreational shooting of firearms
- Use of alcohol or other drugs
- Smoking cigarettes/using tobacco products
- Driving off-road or all-terrain vehicles/Reckless driving

'Strategies I will use to reduce my risk of developing a communication disorder'

- Limit my exposure to loud noise and music
- Wear ear protection when working with power tools or shooting firearms
- Eliminate or reduce reckless behaviors (e.g., binge drinking, smoking pot, driving at high speeds)
- Use proper breath support when talking

'Persons in my environment who will support my efforts to maintain communication wellness'

- Friends, peers, teammates
- Coaches, ACE staff
- Academic advisor, faculty members
- Family members

CONCLUSIONS

This paper has presented one component of a comprehensive program—Athletes Communicating Effectively—that focused on communication wellness and the prevention of communication disorders. In examining the outcomes of the program, we found that the 150 students-athletes who participated in the ACE program progressed toward the end point of the arrow as seen in Figure 1 as effective communicators. In other words, due to their increased awareness, education and self-goal delineation and attainment, these student-athletes were found to be moving in a positive direction toward achieving maximum communication wellness and effectiveness irrespective of whether an identifiable communication disorder was found or not found.

In examining factors that influenced the college selection process of 126 student-athletes, Letawsky, Schniederm, Pedersen, and Palmer (2003) reported that academic support services on campus ranked third (mean = 3.83 on a five-point likert scale) among the five top influential factors. We propose that these services should not only include traditional components of academic support like tutoring for challenging course work, but should also involve student-athletes in activities that promote overall success as a student and future participant in the workforce. Engaging student-athletes in activities as presented in the ACE program



can lead to them being an effective communicator throughout their young adult to mature adult lifespan.

New to topics presented in the USDHHS Healthy People 2020 (HP 2020) (USDHHS, 2012) initiative is a focus on adolescents (ages 10-19) and young adults (ages 20-24). Together, these two age groups incorporate the typical age range of undergraduate college students, including college student-athletes (ages 18-21). For the most part, this population is said to be in good health. However, as the youthful cohort continues to transcend into full adulthood, their health and well-being can be supported by what HP 2020 calls environmental factors; family, peer group, school, neighborhood, policies and societal cues. These environmental factors are reinforced as an important consideration in the ACE program model. Scholar-athletes were asked to scan both their campus and non-campus environments to identify supportive influencers who could further guide the student-athlete toward positive lifestyle choices involving communication wellness.

Additionally, HP 2020 advocates increasing the proportion of young people who have had annual wellness checkups (Objective AH-1). We propose that any wellness checkup administered to this group include a communication wellness section. As wellness programs for students and staff continue to gain impetus on college and university campuses, all or selected components of the ACE program model can be used with students engaging in intercollegiate sports, intramural sports and the general student population.

Due to the popularity of sports on college campuses, studentathletes who engage in a communication wellness program like ACE, can act as role models for entering freshmen and college transfer students. Specifically, through live or recorded commentaries presented during new student orientation programs, student-athletes can tell their "I stories" about the personal benefits gained from a program focused on communication wellness as a current student-athlete, and how they intend to use their newly developed communication and healthy lifestyle skills in their future career endeavors.

Finally, wellness and preventive practices are a key strategy being emphasized by the Affordable Care Act (recently upheld by the U.S. Supreme Court as law) to reduce health care cost over time. A list of prevention practices under this new law are found at http://www.healthcare.gov/prevention/index.html and include several lifestyle areas that affect young adults (e.g., obesity, alcohol misuse, blood pressure, diet, type 2 diabetes). These preventive services must be covered without consumers having to pay a co-payment, a co-insurance or meet a deductible. The growing interest at the highest levels of government in the United States to provide our citizens with preventive services should be strongly considered as a major responsibility of all health care providers, including communication disorders professionals.

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